



# **IFOAM Organics Europe position paper on carbon farming and the revision of the LULUCF Regulation**

Finding synergies between climate  
action and biodiversity protection

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## Summary

The organic movement welcomes the ‘Sustainable Carbon Cycles’ initiative of the European Commission on “carbon farming” which brings focus on soil carbon sequestration on agricultural land. While climate mitigation should clearly prioritize absolute emissions reductions, carbon sequestration in the land use sector will also be needed to meet long-term climate objectives. However, it is essential that “carbon farming” does not only contribute to increased carbon sequestration, but also to the protection of biodiversity and to other environmental objectives. Biodiversity is not simply a “co-benefit” of carbon sequestration in soils; well-functioning ecosystems and biodiversity are a necessary condition for agriculture ecosystems resilience, climate mitigation and adaptation. “Carbon farming” should therefore target systemic transitions of farming systems, through the adoption of a multi-dimensional approach (beyond a carbon-focused one)<sup>1</sup>.

Organic farming contributes significantly to soil carbon sequestration and higher soil organic carbon stocks compared to conventionally managed soils, and it delivers benefits for soil health, water quality and biodiversity protection. Organic farming therefore offers a systemic approach to carbon farming. IFOAM Organics Europe believes that carbon sequestration in the agricultural sector should be incentivized, that the adoption of beneficial management practices should be encouraged and that farmers should be remunerated for their efforts. However, the organic movement doubts that carbon markets are the right way to provide funding for carbon farming practices. Moreover, carbon sequestration in agriculture should not compensate for greenhouse gas emissions from other sectors. First movers, such as organic farmers, who are already contributing to higher carbon stocks, should not be penalised, as carbon farming schemes are likely to reward “additional” efforts. A multi-dimensional and systemic approach is essential to avoid greenwashing and to support a transition of our food system towards agroecology.

## 1. Introduction

The agriculture sector has an active role to play in climate action. It is directly affected by the impacts of climate change, and it is also directly responsible for about 10% of the EU greenhouse gas (GHG) emissions. But when looking at the food system as a whole, the contribution of food production to global emissions goes up to 21-37%, according to the estimations by the IPCC<sup>2</sup>. While climate mitigation should clearly focus on absolute emissions reductions, carbon sequestration in the land use sector will also be needed to meet long-term climate objectives. Common organic farming practices can contribute significantly to soil carbon sequestration and higher soil organic carbon stocks compared to conventionally managed soils, and in synergy deliver benefits for soils health and biodiversity protection. Increased soil carbon content also contributes to farming systems resilience and climate adaptation, through an improved soil structure, increased water retention capacity and decreased risk of soil erosion. The organic movement believes that the climate and biodiversity crisis have to be tackled together and that mitigation in the agriculture sector should not lead to trade-offs with biodiversity protection and ecosystem services. Furthermore, carbon sequestration in the land use sector should not lower the emissions reductions ambition in other economic sectors.

## 2. Policy Framework

The **European Green Deal** and the **European Climate Law** have the objectives of ensuring that GHG emissions and removals are balanced, and that carbon neutrality is reached within the EU at the latest by 2050. This objective has profound implications for the land use sector, which is expected to offer offset possibilities for the remaining GHG emissions of the agriculture sector but also of other economic sectors. After the adoption of the new **European Climate Law** in June 2021, which sets a 2030 climate target of at least 55% reduction of net emissions compared to 1990 levels, the Commission presented in July 2021 its “**Fit for 55 package**”. It consists of several legislative initiatives aimed at reaching the 55% net reduction target by 2030, as a step towards a climate neutral EU by 2050. As part of this package, the European Commission proposed to revise the LULUCF (Land Use, Land Use Change and Forestry) Regulation and the Effort Sharing

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<sup>1</sup> IDDRI Policy Brief January 2022, Design principles of a Carbon Farming Scheme in support of the Farm2Fork & FitFor55 objectives: <https://www.iddri.org/en/publications-and-events/policy-brief/design-principles-carbon-farming-scheme-support-farm2fork>

<sup>2</sup> IPCC, 2019. Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. In press.

Regulation (ESR), which both address agricultural GHG emissions and removals. The ESR covers all agricultural non-CO<sub>2</sub> emissions (methane and nitrous oxide) whereas the LULUCF Regulation includes CO<sub>2</sub> emissions and removals from crop and grassland, and from forests. The LULUCF sector acts as sink at EU level with a total net removal of -250 million tonnes CO<sub>2</sub>eq in 2019<sup>3</sup>. However, this is largely due to removals by forests. Cropland and grasslands are currently net CO<sub>2</sub> emitters at EU level.

The revision of the [LULUCF Regulation \(EU\) 2018/841](#) aims to set a new 2030 EU target of net greenhouse gas removals of 310 million tonnes CO<sub>2</sub> eq. It also suggests splitting up the use of the flexibility mechanism into two compliance periods (2021-2025 and 2026-2030). A new policy framework is proposed for the period after 2030, that would include all agricultural emissions (CO<sub>2</sub>, but also methane and nitrous oxide currently accounted for within the ESR) in the land use, land use change and forestry sector with the ambition to reach EU-wide climate neutrality in the combined land sector by 2035.

The proposal for the revision of the [Effort Sharing Regulation \(EU\) 2018/842](#) aims to increase the EU-wide GHG emission reduction target from 30% to at least 40% by 2030 compared to 2005 levels for the sectors covered by the ESR (transport, buildings, agricultural direct non CO<sub>2</sub> emissions, waste and other industries not covered by the EU Emissions Trading Scheme) and to adjust the existing flexibilities with LULUCF credits to meet the national targets. It also suggests setting up a new voluntary additional reserve of unused LULUCF credits at the end of the second compliance period for Member States to comply with the 2030 targets.

Furthermore, as announced in the Farm to Fork strategy, the Commission presented in December 2021 a **communication on “Sustainable Carbon Cycles”**, addressing also carbon farming, to promote technological and nature-based carbon removal solutions. In 2022 a **regulatory framework for the certification** of carbon removals should follow.

### 3. Proposals for revised legislation

Within the “Fit for 55” package the European Commission proposes to revise the ESR and LULUCF Regulations. The LULUCF Regulation should be split into two compliance periods. Only minor changes are suggested for the first compliance period (2021-2025) but significant changes for the second compliance period (2026-2030). This also has an impact on the ESR, mainly in terms of the LULUCF flexibility mechanism.

#### a. Flexibilities and two compliance periods

The LULUCF flexibility allows Member States to use LULUCF credits towards their compliance with emission reduction targets in the ESR sector. Credits can be generated currently by Member States by absorbing more carbon in the LULUCF sector than they emit. The revision of the legislation foresees splitting the use of the LULUCF flexibility into two five-year periods and each period will have a cap corresponding to half of the maximum amount of total net removals. After the first compliance period (2021-2025) no more surplus removals can be banked to the second compliance period by Member States. In the first compliance period the current “no debit” rule will stay in place and for the second compliance period an EU target of removals is proposed, that is supposed to reach 310 million tonnes CO<sub>2</sub> equivalent in 2030. LULUCF credits for the compliance with the ESR can be generated by Member States overachieving their targets.

#### IFOAM Organics Europe recommendation

Offsetting genuine emission reductions under the ESR with non-permanent sequestration under LULUCF is problematic as it cannot be considered interchangeable and does not reduce emissions in the long term. Furthermore, there is a high level of uncertainty around natural carbon sinks and concerns that removals in the land use sector could be non-permanent and reversible. The organic movement therefore calls for ambitious emissions reductions in all sectors. However, some flexibility is acceptable between emissions under the ESR and sinks under LULUCF but such flexibility should strictly be limited within the agriculture sector, and agricultural sinks should not be accounted as emissions reductions outside the agriculture sector. To move towards carbon neutrality, all sectors need to deliver, and no sector should deliver on behalf of another one.

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<sup>3</sup> [EEA greenhouse gases - data viewer — European Environment Agency \(europa.eu\)](#)

## **b. 2030 EU target (310 million tonnes GHG removals)**

The current LULUCF Regulation does not include an EU target for the LULUCF sector but a “no-debit” rule. This component requires Member States to ensure that their accounted emissions from the land use sector do not exceed their removals. The Commission proposal lays out an overall EU target of net GHG removals of 310 million tonnes CO<sub>2</sub> equivalent in the LULUCF sector by 2030, which will be distributed as annual binding national targets between Member States in the second compliance period, between 2026 and 2030. For the first compliance period the “no-debit” rule will stay in place.

### **IFOAM Organics Europe recommendation**

The organic movement welcomes an EU-wide LULUCF removal target that goes beyond the current no-debit rule. First, emissions have to be drastically reduced but then the land sector can play an important role in taking up residual emissions. Organic farming and agro-ecological practices are already contributing to higher soil carbon stocks and sequestration rates compared to land under conventional management. The focus should not only lie on the amount of carbon that is removed but on favourable management practices which increase carbon sequestration and at the same time deliver benefits for biodiversity protection and ecosystem services.

## **c. AFOLU pillar**

The proposal of the European Commission foresees combining the agriculture non-CO<sub>2</sub> GHG emissions (methane and nitrous oxide), that are currently covered by the ESR, with the emissions of the land use, land use change and forestry sector, hence creating a newly regulated land sector with one policy instrument called ‘AFOLU’ (Agriculture, Forestry and Other Land Use) pillar from 2031 onwards. The Commission mentions that the land sector should be achieving climate neutrality by 2035 and becoming a CO<sub>2</sub> sink after that. From 2036 onwards the AFOLU sector should balance remaining emissions generated in other sectors.

### **IFOAM Organics Europe recommendation**

The organic movement welcomes a systemic approach to all agricultural emissions provided that the enhancement of natural carbon sinks does not undermine ambitious GHG emissions reductions in all sectors. Agricultural emissions should therefore not be “hidden” and compensated by forestry removals, which would be the case with the creation of an AFOLU pillar. The agriculture sector should move towards carbon neutrality by itself without having emissions being compensated by the forestry sector. This is essential to ensure a high level of ambition and sufficiently incentivise mitigation action in the agriculture sector. This should, however, not stop incentivizing the enhancement of natural carbon sinks that are in line with biodiversity and environmental protection objectives.

## **d. Voluntary additional reserve of unused LULUCF credits to comply with ESR**

If in 2030 a reduction of -55% GHG emissions has been achieved within the EU, with a maximum contribution of 225 million tonnes CO<sub>2</sub> equivalent of net removals, an additional reserve can be established by Member States to meet their 2030 ESR targets. The reserve will then equal the amount of carbon removals that a Member State has overachieved in the second compliance period, minus the flexibilities that have already been used in the period 2026-2030. Member States have the possibility to opt out of this reserve mechanism.

### **IFOAM Organics Europe recommendation**

The organic movement welcomes an incentive to increase the LULUCF sinks if they are in accordance with biodiversity safeguards. However, carbon removals should not be a means to lower emissions reductions ambitions in other sectors. Therefore, carbon removals from agricultural soil carbon sequestration should only be used to comply with emission reductions under the ESR from the agricultural sector.

## 4. Carbon farming and carbon certification

In December 2021 the European Commission presented a Communication on ‘Sustainable Carbon Cycles’<sup>4</sup>. The Communication addresses how to increase carbon sequestration and scale up “carbon farming” as a business model. In 2022, the Commission will propose a regulatory framework for accounting and certifying carbon removals, with the aim to provide the necessary legal framework to scale up carbon farming and provide clarity on the quality of carbon removals. In the Communication, the Commission mentions the key role of public funding to kick-start carbon farming and complement private financing and it calls on Member States to integrate carbon farming into their CAP strategic plans. The communication of the European Commission outlines five carbon farming practices: afforestation and reforestation, agroforestry, use of catch crop, cover crops and conservation tillage, conversion of cropland and set-aside areas and restoration of peatlands and wetlands.

Soils are pivotal in regulating emissions and the cycling of CO<sub>2</sub> and other greenhouse gases. Carbon sequestration in the land use sector therefore has a crucial role to play to meet the long-term climate objectives. Practices that are standard in organic farming can contribute significantly to soil carbon sequestration, as shown by significantly higher soil organic carbon stocks in land under organic management compared to land under conventional management (by 3.5±1.1 tonnes of carbon per hectare) and to higher annual sequestration rates (up to 0.5±0.2 tonnes of carbon per hectare and year)<sup>5</sup>.

IFOAM Organics Europe believes that the adoption of beneficial management practices for carbon sequestration and biodiversity protection in the agricultural sector should be encouraged and that farmers should be remunerated for their efforts. However, it is essential that carbon farming does not only deliver on increased carbon sequestration, but also provides at the same time benefits for biodiversity and other environmental objectives. Through synergies organic farming delivers benefits for soils health and biodiversity protection and offers therefore a systemic approach to carbon farming. Increased conversion to organic agriculture can contribute to carbon sequestration in soils, while also bringing important benefits, such as improved system resilience to the effects of climate change, maintaining biodiversity on farmland, conserving soil fertility, reducing eutrophication and water pollution, and improving food security and farmers’ sovereignty.

**Organic farming should therefore be recognized as a carbon farming practice, given its holistic approach to climate and nature and the benefits it provides for climate mitigation, adaptation and ecosystem health.**

In addition to mitigation, increasing soil carbon content also contributes to resilience and climate adaptation, through an improved soil structure, increased water retention capacity, positive impact on plant health, and decreased risk of soil erosion caused by extreme weather events. A healthy soil also has a positive impact on agricultural productivity. The EU Action Plan on the development of organic farming states that organic farming is a model to follow in moving towards more sustainable farming practices and is currently the only system with a robust certification method<sup>6</sup>. The development of organic farming fosters the wider adoption of agricultural practices that deliver climate benefits and soil carbon sequestration while ensuring biodiversity protection. The increased biodiversity on organic farms can be explained among other reasons due to refraining from using synthetic fertilizers and pesticides, maintaining more semi-natural areas and having a higher field and farm complexity<sup>7</sup>.

Agriculture is currently a net emitter of GHG and accounts directly for around 10% of the EU total emissions. Looking at the food system as a whole, taking into account in particular land use change and global deforestation linked to agriculture, the IPCC estimates the contribution of food production between 21-37% of the global emissions<sup>8</sup>. Carbon sequestration in soils definitely has an important role to play for carbon removals but the

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<sup>4</sup> European Commission, 2021. Sustainable Carbon Cycles. COM(2021) 800 final.

<sup>5</sup> Gattinger, A., et al 2012. Enhanced top soil carbon stocks under organic farming. Proceedings of the National Academy of Sciences, 109, 18226-18231.

<sup>6</sup> European Commission, 2021. Action Plan for the Development of Organic Production, 2021. COM(2021) 141 final/2.

<sup>7</sup> [IFOAM Organics Europe, 2021. Organic Farming and Biodiversity – Policy Options.](#)

<sup>8</sup> IPCC, 2019. Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. In press.

realistic mitigation potential is difficult to assess since it depends on, and varies widely between, different regions, climate and soil types. Given the uncertainties its potential should not be overestimated.

Climate mitigation should always clearly prioritise absolute emissions reductions. Carbon sequestration should be additional to reduction efforts and not disincentivise them. Soil carbon sequestration should not be an easy way for other sectors to reduce their net GHG emissions by measures in the agriculture sector. Besides, it is unlikely that the agricultural sector will be able to move towards carbon neutrality and at the same time offer emissions compensations opportunities for other sectors. However, soil carbon sequestration should be further incentivised and farmers should be rewarded for their efforts and the contributions they are undertaking for climate change mitigation and adaptation, e.g. through the CAP.

### **a. Biodiversity safeguards**

The strong interlinkage between biodiversity and climate objectives requires them to be addressed together. The preservation of biodiversity and healthy ecosystems is essential for carbon storage, the adaptation to consequences of climate change such as extreme weather events and the provision of clean water, air and healthy soils. Climate action, such as enhancing natural carbon sinks, should not lead to further threats to biodiversity and ecosystem services. Focusing solely on GHG emissions could lead to incentives counteracting biodiversity and animal welfare objectives and the aim to reduce the sales of antimicrobials and the use and risk of chemical pesticides as set out in the Farm to Fork strategy and the EU biodiversity strategy. The organic movement believes that all negative impacts of agriculture have to be addressed together.

Adopting a systemic approach to reduce GHG emissions from food production and to transition towards sustainable food systems is essential. We need management practices that deliver benefits for climate, biodiversity and ecosystem services at the same time. By focusing only on the amount of carbon in soils we risk incentivising management practices that fail to deliver on other environmental objectives and lead to trade-offs. Instead, the EU should engage in a food system transformation and move agriculture towards agroecological approaches such as organic farming. Therefore, only solutions that also deliver benefits for biodiversity and other environmental objectives should be supported. A clear definition of practices should be developed laying out which practices will be supported, and which practices pose a risk to the ecosystem integrity and will therefore not be supported (e.g. use of GMOs in the production process, the use of herbicides or synthetic pesticides with a long life cycle, conversion of land with high biodiversity). A carbon farming initiative should include explicit safeguards for biodiversity, ecosystem services and animal welfare. A systemic approach, at field, farm and landscape levels, is needed to deliver synergistic benefits for biodiversity, adaptation, soils and mitigation.

### **b. Emissions from other sectors**

The European Commission's Communication states that carbon farming credits 'should become an additional "product" that land managers can sell' and 'buyers of these credits could be economic operators within the bioeconomy' and 'could also be companies and individuals who want to financially contribute to more climate action on the land'. Climate mitigation should clearly prioritise absolute emissions reductions in all sectors. Carbon neutrality should be aimed for within the agricultural sector itself and compensation should not be possible across sectors. Residual agricultural emissions that remain even after ambitious reductions, e.g. methane or nitrous oxide, could however be compensated by carbon sequestration in agricultural soils as this is considered within the agriculture sector. Compensation within the agricultural sector should be limited to soil carbon sequestration, landscape elements and agroforestry and exclude pure forestry offset. The focus should lie on how to incentivise management practices, like the use of cover crops, green manure, creation and maintenance of landscape elements (e.g. hedgerows), shallow ploughing, minimal tillage and no-till systems that are beneficial for climate, biodiversity and ecosystem services and go beyond just considering tonnes of carbon being removed.

### **c. Monitoring, Reporting and Verification**

When certifying carbon removals, the high uncertainty of natural sinks, the long-term, non-permanent and reversible nature of soil carbon storage, and the levelling-off of sequestration rates have to be considered carefully. Furthermore, there need to be clear guidelines to avoid double counting and that carbon removals are claimed several times from different actors. If farmers sell their carbon removals to other sectors it does not

count towards their own carbon balance anymore and makes it difficult to reach carbon neutrality within the farming sector.

#### **d. Past efforts**

Common organic farming practices led up until now to significantly higher soil organic carbon stocks and sequestration rates compared to conventionally managed soils, while sustaining on average 30% more biodiversity on farms. These already existing efforts and high carbon stocks have to be recognised and a carbon farming initiative should not favour those who have failed to take action in the past. The actual soil carbon sequestration potential is very site-specific and depends beside previous management practices also on climate and soil conditions. Therefore, carbon farming should look beyond sequestration rates and consider also saturation levels and the important maintenance of soil carbon stocks.

#### **e. Long term management**

The long-term nature of soil carbon sequestration and its reversibility require adequate management practices over a long period of time in order not to lose the sequestered carbon to the atmosphere. A one off payment risks not being able to prevent the reversibility of soil carbon stocks and to ensure the permanence of the carbon stock by a change in management practice. New and existing public funds, like the CAP, will be necessary to incentivise favourable management practices.

To maximise the environmental and climate potential of organic farming beyond the scope of organic standards, the EU must ensure that Member States prioritise organic farming under agri-environmental-climate schemes targeted at carbon farming and environmental goals.

#### **f. Risks of relying on carbon markets and the need for public funding**

Carbon markets should not be a way for other sectors to reduce their net GHG emissions by climate action in agriculture, but carbon neutrality should be aimed for within every sector itself. Instead of establishing carbon markets, which entail issues concerning exact quantification, monitoring and verification, the focus should lie on how new and existing public funds, like the Common Agricultural Policy (CAP), can be used to best incentivise favourable management practices. IFOAM Organics Europe stands for the principle that public money has to deliver public goods (see also [vision paper on the CAP](#)). Reaching the Farm to Fork and Biodiversity strategies target of 25% agricultural land under organic farming by 2030 will also positively impact carbon stocks in soils. Agricultural carbon removals, such as soil carbon sequestration, agroforestry or landscape elements should therefore only be used to compensate residual agricultural emissions.

A risk of a carbon market with tradeable carbon credits is, that the price of the credit will decide whether increasing soil carbon sequestration is a financially rewarding option for a farmer. If the price is too low farmers risk not profiting from their additional efforts and a low carbon price might even disincentivise favourable management practices. Furthermore, the benefits for biodiversity and other environmental objectives that the farmer delivers alongside enhancing carbon sequestration have to be recognised as well, and clear safeguards are needed. The uncertainty of the exact sequestration and the associated monitoring, reporting and verification costs pose another risk to the profitability for farmers. The price for carbon credits on a voluntary carbon market will not be determined by the actual cost of carbon sequestration but by the buyers of carbon credits to off-set their carbon emissions. The price might therefore be influenced by companies having a big market share, being market leader or by the value of the product they sell. This might favor big companies that are being able to pay a higher price for carbon credits and potentially pose a barrier for small operators or new start ups to access the market because of their inability to buy carbon credits to offset their emissions.

## **5. Other relevant aspects**

### **a. Agroforestry**

Expanding the coverage of agroforestry and woody semi-natural elements like hedgerows, can have a large carbon sequestration potential, depending on the tree density, species and soil conditions, and deliver at the same time benefits for biodiversity, animal welfare if combined with animal production, wildlife, soil health and water protection and management. Agroforestry and its multiple benefits is perfectly in line with the organic principles. Trade-offs should be avoided by choosing arable cropland for agroforestry management instead of expanding it on land with high biodiversity value.



## **b. Legally binding nature restoration targets**

There should be policy coherence between the Commission's initiatives for reducing GHG emissions from agriculture and increasing carbon sequestration, initiatives aimed at biodiversity protection and ecosystems restoration and the evaluation of the national CAP Strategic Plans. The planned EU legislation on legally binding nature restoration targets should clearly reflect the biodiversity protection objectives and support the achievement of the 2030 and 2050 climate goals. It should therefore include targets on ecosystems that are rich in carbon, such as the restoration of peatlands, the protection of unimproved pastures, expansion of permanent grassland and an increase of the soil organic carbon in agricultural mineral soils. Adequate funding, including the CAP paying for carbon beneficial practices, will be needed to incentivise favourable practices

## Annex

### Proposals for revised legislation

[COM/2021/554 final](#) Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) 2018/841 as regards the scope, simplifying the compliance rules, setting out the targets of the Member States for 2030 and committing to the collective achievement of climate neutrality by 2035 in the land use, forestry and agriculture sector, and (EU) 2018/1999 as regards improvement in monitoring, reporting, tracking of progress and review

[COM/2021/555 final](#) Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement